

TABLE 4

Treatment	Tumor Volume at 16 days	
	Trocar Site (g)	All Other Sites (g)
control	.485	.929
.1% PLL-b-PEG	.179	.297
1% PLL-b-PEG	.160	.173

EXAMPLE 6

Synthesis of methacrylic PEG copolymerized with aminoethyl methacrylate.

Monomethoxy PEG was reacted with methacryloyl chloride under anhydrous conditions, producing methacrylic PEG. This was copolymerized with aminoethyl methacrylate (AEMA), to yield 85 AEMA:15 methacrylic PEG. The product was then dialyzed against water using the method of U.S. Pat. No. 5,075,400 to Andrade, et al. "Polymer surfactants for protein resistance and protein removal".

EXAMPLE 7

Evaluation of AEMA/methacrylic PEG copolymer in vitro.

Human foreskin fibroblasts were trypsinized and seeded in complete media containing 0.2% (w/v) AEMA/methacrylic PEG copolymer. Cells were seeded on polystyrene culture dishes at a concentration of 2000, 15,000, 30,000 cells/cm².

TABLE 5

treatment	Concentration of Spread Cells 3 hour post-seeding.		
	concentration of cells (cells/cm ²)		
	2000	15,000	30,000
AEMA copolym.	0	0	0
none	212	>1000	>1000

The results demonstrate the effectiveness of the polymer in preventing attachment and growth of the treated cells, especially as compared with the control cells.

Modifications and variations of the methods and compositions described herein will be obvious to those skilled in the art from the foregoing detailed description. Such modifications and variations are intended to come within the scope of the appended claims.

We claim:

1. A biocompatible polymeric material selected from the group consisting of block copolymers having the formulas (A)x-(B)y where the polymer is a brush copolymer having bristles of poly(A), (A)x(B)y, (A)x(B)y(A)z, and (B)x(A)y(B)z wherein

(A)x, (A)y and (A)z are biocompatible synthetic polymers and mixtures of polymers that form a region which is polyanionic at a pH of between 6.5 and 8.5 and does not bind tissue, and

(B)y, (B)x, and (B)z are biocompatible, water-soluble synthetic polymers or mixture of polymers that form a region which is polycationic at a pH of between 6.5 and 8.5 and binds to tissue; and wherein

x is an integer of greater than or equal to 5, y is an integer of greater than or equal to 3 and z is an integer of greater than or equal to 0,

wherein the polymer has a molecular weight of at least 300 g/mole,

in combination with a pharmaceutically acceptable carrier for administration to a patient.

2. The biocompatible polymeric material of claim 1 wherein the polymer has the formula (A)x-(B)y wherein

x is an integer of greater than or equal to 5, y is an integer of greater than or equal to 3 and z is an integer of greater than or equal to 0.

3. The polymeric material of claim 1 wherein (A)x and (A)z are selected from the group consisting of poly(oxyalkylene oxides), poly(ethyloxazoline), poly(N-vinyl pyrrolidone), poly(vinyl alcohol), neutral poly(amino acids) and copolymers of monomers selected from the group consisting of oxyalkylene oxides, ethyloxazoline, N-vinyl pyrrolidone, vinyl alcohol, and amino acids.

4. The polymeric material of claim 1 wherein (B)y is selected from the group consisting of poly(ethyleneimine), quaternary amines, and polyamines having amine groups on either the polymer backbone or the polymer sidechains.

5. The polymeric material of claim 1 further comprising a region C that is subject to degradation in vivo by hydrolysis, enzymatic degradation, or oxidation.

6. The polymeric material of claim 5 wherein C is selected from the group consisting of peptide sequences and saccharide sequences cleaved by an enzyme present in vivo.

7. The polymeric material of claim 5 wherein C is selected from the group of chemical compounds which hydrolyze in the presence of water.

8. The polymeric material of claim 5 wherein C is selected from the group of chemical compounds which oxidize in vivo.

9. The polymeric material of claim 5 wherein the C region or regions is between the tissue binding regions (B)y and the non-tissue binding regions (A)x.

10. The polymeric material of claim 5 wherein the C region is located within the tissue binding region (B)y between the points of attachment of the non-tissue binding regions (A)x.

11. The polymeric material of claim 1 wherein the tissue binding region (B)y converts to a non-tissue binding region when exposed to water, oxidation or to enzymatic attack.

12. The polymeric material of claim 11 wherein the tissue binding region (B)y is formed by polymerization of amides or esters.

13. The polymeric material of claim 1 wherein the non-tissue binding region (A)x converts to a tissue binding region when exposed to water, oxidation or to enzymatic attack.

14. The polymeric material of claim 1 further comprising an agent which is biologically active in a patient.

15. The polymer of claim 14 wherein the polymeric material is biodegradable, and the biologically active agent is a component which is released as the polymer degrades.

16. The polymeric material of claim 14 wherein the biologically active agent is chemically coupled to the polymer.

17. The polymeric material of claim 1 wherein the pharmaceutically acceptable carrier for administration to a patient in need of treatment thereof is selected from the group consisting of water and buffered aqueous solutions.

18. The polymeric material of claim 17 where the non-tissue binding region (A)x is polyanionic and soluble in water.